

WALLONIA, AT THE FOREFRONT OF INNOVATION

Wallonia is home to a high density of **innovation players** in the fields of **health biotechnologies** and **medical technologies**. Among those, you find **5 biopharmaceutical industry leaders** (GSK Vaccines, UCB, Baxter, Zoetis and Eurogentec), **5 universities and their affiliated hospitals** (UCL, ULB, ULG, UMONS and UNAMUR), prestigious research institutes and **170 highly specialized and innovative SMEs**. BioWin, the health cluster of Wallonia, is gathering these players and fostering innovative collaborations at regional and international levels since 2006. The region also benefits from **strategic assets** to innovate in health including **public/private funding** opportunities, **excellent scientific education programs** in biomedical sciences (at universities and higher education schools), a **leadership in clinical trials**, support services to the industry and a favorable business development environment. Consequently **Wallonia** is a **successful ecosystem** to generate new products and to bring them to the global market.

On top of that, Wallonia is located South of Brussels, **less than 2 hours** from most **European destinations**, with high speed connections to the European market including 2 regional airports (Liège and Charleroi), **high speed train lines** and a high density network of **highways**. The region is also home to many **biologicistic professionals** with a strong expertise in delivering biopharmaceutical and biotech products all over the world;

BioWin is the **regional reference** for all stakeholders (companies, research centers and universities) engaged in innovative R&D and/or skills development projects in the field of health biotechnology and medical technologies. The cluster implements many actions designed to **promote Walloon scientific and industrial excellence at the international level**. More information is available on our website www.biowin.org and blog page www.win-health.org.



Find in **Wallonia (Belgium)**, the **solution providers to face** your **biomanufacturing challenges**



BioWin
THE HEALTH CLUSTER OF WALLONIA

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BIOMANUFACTURING IN WALLONIA

READY TO FACE THE CHALLENGES OF TOMORROW ?

The **main trends** in **biomanufacturing** are

- Continuous **flow manufacturing**
- **Disposable** and **closed** systems
- **Regional plant** units
- **Manufacturing design**

The **paradigm** is shifting from large scale central manufacturing plant towards smaller **regional** plants, with less complex and continuous **flow manufacturing** processes, **disposable** and closed systems in production halls – **closed systems** require lower room classification, like class D or even unclassified areas – based on a **specific manufacturing design**, increasing the productivity while decreasing the costs.

WALLONIA HAS PLENTY OF SOLUTION PROVIDERS TO HELP YOU MEET THESE CHALLENGES

1) **Large companies manufacturing** their own biopharmaceuticals in the region



2) **Contract Manufacturing Organizations (CMOs)** with large **product scope** (Vaccines, DNA, ATMPs, Antibodies, etc.)*

3) Companies **offering products and services** to optimize your **biopharmaceutical manufacturing**



4) Companies **developing dedicated equipment** for your plant



5) Companies with **engineering capabilities** for your plant design



6) Companies with **software expertise** for **monitoring** your manufacturing process



KEY FIGURE ABOUT INDUSTRIAL BIOMANUFACTURING FACILITIES IN WALLONIA

Company name	Creation date	Jobs in Full time equivalents	Expression system	Products	M² Clean rooms & fermentation scale
DELPHI	29/11/2001	15	Bacteria: E. coli Mammalian cells: CHO, HEK...	Plasmid DNA Recombinant proteins Antibodies	35 Fermentation scale: 50L
Eurogentec Experience true partnership	1985	231	Bacteria (mainly E.coli) Yeast (mainly Pichia pastoris, saccharomyces cerevisiae)	Plasmids (pDNA), Recombinant proteins, vaccine, conjugates, (protein-peptide, protein-PEG)	600 m2. 6 production units with fermenters size 80L, 150L and 500 L
MaSTherCell Manufacturing Synergies for Therapeutic Cells	11/2011	75 (over 100 by the end of this year)	Cells & virus	Cell & gene therapy products	600m2 (+600,m2 by end 2016)
novasep	1995 (Henogen)	107	Mammalian cells, insect cells	Viral Vectors, vaccines, VLP, Recombinant proteins, Mono-clonal antibodies	800 m2

A UNIQUE ENVIRONMENT TO DEVELOP AND MANUFACTURE YOUR PRODUCTS

- Strong **support** to innovation in health from the **Regional Government** of Wallonia
- Favorable **tax environment** and **R&D incentives**
- Many **public** and **private investment funds** (university funds, regional and sub-regional funds, venture capital, international VC's,...) to **support innovation in health**
- Excellence in **academic research** and **clinical development**
- **Large capacities** for manufacturing biopharma products. More than **2035² GMP facility** (2635 by the end of 2016)
- **Complete ecosystem** with support expertise along the value chain **including universities technology transfer offices, incubators, spin off/start up, support services, more than 10 actors** with expertise in 3D printing, analytical services, biomaterials, bioreactors, clean rooms, immunomonitoring, logistics, quality control, etc.
- **Highly qualified** and **multicultural professionals**
- **Relevant education** and **training programs** to answer specific biomanufacturing sector needs

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